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From: Chief of Naval Operations (N889H)

To: Commander, Naval Air Systems Command (PMA2053E3)

Subj: APPROVAL OF PROPOSED NAVY TRAINING SYSTEMS PLAN (NTSP) FOR THE CABLE HARNESS REPAIR OR

REMANUFACTURING EQUIVALENCE PROGRAM (CHROME), N88-

NTSP-A-50-8512B/A

(a) COMNAVAIRSYSCOM ltr 1500 Ser PMA2053E3/0500008 of 15 May 00

(1) NTSP dated May 2000

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2. OPNAV point of contact is LCDR M. E. Belcher (N889H1), DSN 664-7714, Comm: (703) 604-7714.

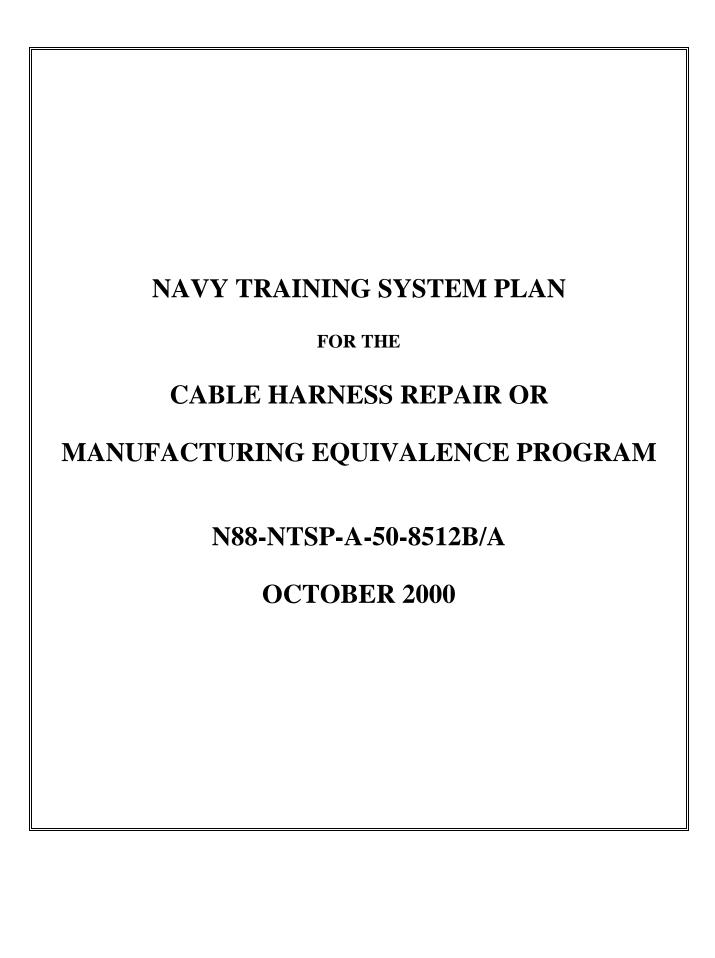
T. M. VANDENBERG

Captain, U. S. Navy

Head, Aviation Technical Training Section

Copy to:

COMNAVAIRSYSCOM (AIR-3.4.1)



EXECUTIVE SUMMARY

As a result of a 1986 Government Accounting Office Investigation citing wiring problems as the leading consumer of aircraft unscheduled maintenance man-hours, intermediate level Cable and Connector Repair Shop (Work Center 69C) was established. The investigation concluded that the absence of a repair and manufacturing capability for aircraft wiring and cables contributed significantly to Non-Mission Capable and Partial Mission Capable rates. In September 1996, Chief of Naval Operations (N881) identified the CHROME equipment as an APN-7 approved requirement. All CHROME equipment is a Commercial Off-The-Shelf acquisition. The CHROME Program separates equipment into three groups. Group 0 consists of the A/U24T-1 (V) Wire Test Set, A/E32M-38 Wiring Systems Repair Tool Set, A/E 32M-37 Wiring Systems Repair Tool Set (shore sites only), and A/E32M-58 Wiring Systems Repair Tool Set (Marine Corps only). Group I consists of two pneumatic wire crimpers, a pneumatic wire stripper, labeling machine, instant connector kit, air compressor for the Marine Corps, and a six volume set of connector encyclopedias. Group II includes a wire braiding machine and wire processor.

Group 0 equipment entered acquisition Phase III (Production, Deployment, and Operational Support) in August 1995 with a Material Support Date of September 1997. Group I equipment passed Support Equipment Decision (SED) III in June 1997, and was delivered to fleet activities in July 1997. Group II equipment is expected to reach SED III in September 2001, with an estimated Initial Operating Capability of March 2002. Through the use of Groups 0 and I equipment, authorized Intermediate Maintenance Activities (IMA) will test wiring assemblies for pin-to-pin continuity, insulation breakdown, and overall wiring system performance. After fault isolation, the IMA will repair wiring harness assemblies and return them to a Ready For Issue (RFI) status. If repair is uneconomical or unfeasible, the IMA will manufacture a new assembly.

Intermediate level maintenance is performed by Navy Aviation Electrician's Mate (AE) and Aviation Electronics Technician (AT) personnel, and Marine Corps personnel with Military Occupational Specialty (MOS) 6423, Aviation Electronic Micro-Miniature/Instrument and Cable Repair Technicians. All USMC MOS 6423 personnel receive CHROME training via USMC Miniature Electronics/Instrument/Cable Repair Intermediate Maintenance Track M-102-6423. Navy AE and AT personnel may receive CHROME training via Aircraft Electrical Interface Devices Intermediate Maintenance course C-602-3023 on an as required basis. Due to the simplicity of CHROME, no additional maintenance manpower is required. CHROME follow-on training is provided by Maintenance Training Unit (MTU) 1037, Naval Air Maintenance Training Unit (NAMTRAU) Jacksonville, Florida, and MTU 1067, NAMTRAU North Island, California.

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LIST OF ACRONYMS

ACC Aircraft Controlling Custodian AE Aviation Electrician's Mate

AEID Aircraft Electrical Interface Device

AIMD Aircraft Intermediate Maintenance Department

ALSP Acquisition Logistics Support Plan

AMTCS Aviation Maintenance Training Continuum System

AOB Average Onboard

AT Aviation Electronics Technician

CBT Computer-Based Training

CHROME Cable Harness Repair Or Manufacturing Equivalence

CIN Course Identification Number

CINCLANTFLT Commander in Chief, United States Atlantic Fleet CINCPACFLT Commander in Chief, United States Pacific Fleet

CMC Commandant of the Marine Corps

CNATRA Chief of Naval Air Training

CNET Chief of Naval Education and Training

CNO Chief of Naval Operations

COMNAVAIRESFOR Commander, Naval Air Reserve Force COMNAVRESFOR Commander, Naval Reserve Force

DT Developmental Test

FY Fiscal Year

GPETE General Purpose Electronic Test Equipment

GPTE General Purpose Test Equipment

IMA Intermediate Maintenance Activity

IOC Initial Operating Capability
IPB Illustrated Parts Breakdown

MAG Marine Air Group

MALS Marine Aviation Logistics Squadron

MATMEP Marine Training Management and Evaluation Program

MOS Military Occupational Specialty

MSD Material Support Date

MTIP Maintenance Training Improvement Program

LIST OF ACRONYMS

MTU Maintenance Training Unit

NA Not Applicable

NAMP Naval Aviation Maintenance Program
NAMTRAU Naval Air Maintenance Training Unit

NAS Naval Air Station

NATEC Naval Air Technical Data and Engineering Service Command

NAVAIRSYSCOM Naval Air Systems Command

NAVICP Naval Aviation Inventory Control Point

NAWC Naval Air Warfare Center

NAWCAD Naval Air Warfare Center Aircraft Division

NAWCADLKE Naval Air Warfare Center Aircraft Division Lakehurst

NSD Navy Support Date

NTSP Navy Training System Plan

OPNAV Office of the Chief of Naval Operations

OPNAVINST Office of the Chief of Naval Operations Instructions

OPO OPNAV Principal Official

OT Operational Test

PMA Program Manager, Air

PSICP Program Support Inventory Control Point

RAIMD Reserve Aircraft Intermediate Maintenance Department

RFT Ready For Training

SED Support Equipment Decision

SM&R Source, Maintenance, and Recoverability
SPETE Special Purpose Electronic Test Equipment

SPTE Special Purpose Test Equipment

ST Special Tools SU Switching Unit

TBD To Be Determined
TCU Test Control Unit
TD Training Device
TECHEVAL Technical Evaluation
TFS Total Force Structure

N88-NTSP-A-50-8512B/A October 2000

CABLE HARNESS REPAIR OR MANUFACTURING EQUIVALENCE PROGRAM

LIST OF ACRONYMS

TTE Technical Training Equipment

TYCOM Type Commander

ULSS Users Logistic Support Summary

UUT Unit Under Test

WTS Wire Test Set

PREFACE

This Approved Navy Training System Plan (NTSP) for the Cable Harness Repair Or Manufacturing Equivalence (CHROME) Program has been prepared to update the Draft Navy Training Plan, A-50-8512B/D, dated January 2000. This NTSP complies with guidelines set forth in the Navy Training Requirements Documentation Manual and reflects the latest information available. Specifically, this NTSP reflects the following changes to the CHROME program:

- Updates the list of Manpower, Personnel, and Training Principals
- Removes Navy manpower billet requirements (refer to Part I, paragraph H.3. Manning Concept)
- Incorporates revisions in intermediate maintenance training
- Updates onboard (in-service) training to reflect current program status
- Updates logistics support information to include addition of new equipment
- Updates MPT milestones
- Updates points of contact listing

PART I - TECHNICAL PROGRAM DATA

A. NOMENCLATURE-TITLE-PROGRAM

- **1. Nomenclature-Title-Acronym.** Cable Harness Repair Or Manufacturing Equivalence (CHROME)
 - 2. Program Element. 84771X

B. SECURITY CLASSIFICATION

1.	System Characteristics	Unclassified
2.	Capabilities	Unclassified
3.	Functions	Unclassified

C. MANPOWER, PERSONNEL, AND TRAINING PRINCIPALS

OPNAV Principal Official (OPO) Program Sponsor
OPO Resource Sponsor
Marine Corps Program Sponsor
Developing Agency
Training Agency
Training Support Agency
Manpower and Personnel Mission Sponsor
Director of Naval Training
Marine Corps Force Structure

D. SYSTEM DESCRIPTION

1. Operational Uses. The purpose of the CHROME Program is to establish an intermediate level of repair or manufacture of aircraft electrical cables and wiring assemblies. All CHROME equipment is obtained through Commercial Off-The-Shelf acquisitions. The CHROME Program separates equipment into three groups as follows.

Group 0:

- A/U24T-1 (V) Wire Test Set (WTS)
- A/E32M-38 Wiring Systems Repair Tool Set
- A/E 32M-37 Wiring Systems Repair Tool Set (shore sites only)
- A/E32M-58 Wiring Systems Repair Tool Set (Marine Corps only)

Group I

- Pneumatic wire stripper
- Pneumatic wire crimpers two types
- Labeling machine
- Instant connector kit
- Air compressor (Marine Corps only)
- Six volume set of encyclopedias of connectors

Group II

- Wire braiding machines two types
- Wire processor
- **2. Foreign Military Sales.** Not Applicable (NA)
- **E. DEVELOPMENTAL TEST AND OPERATIONAL TEST.** Developmental Test (DT) was successfully completed in August 1988 for Group 0 equipment at the Naval Air Warfare Center, Aircraft Division (NAWCAD) Indianapolis. Operational Test (OT) and Technical Evaluation (TECHEVAL) was not conducted for Group 0 equipment.

OT was successfully conducted by NAWCAD at Patuxent River, Maryland, in May 1994 for Group I equipment. DT and TECHEVAL was not conducted for Group I equipment.

Group II equipment is scheduled for TECHEVAL in July 2001 at NAWCAD Lakehurst (NAWCADLKE), New Jersey. DT and OT are not scheduled for Group II equipment.

F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED. No weapon system, equipment, or program is being replaced. The CHROME Program was established to increase the repair and manufacture capability of faulty cables and wiring harness assemblies for support equipment and aircraft. Previously, most aircraft cables were Source, Maintenance, and Recoverability (SM&R) coded as consumable or depot only repairable items,

and when determined to be faulty, were discarded by Navy and Marine Corps organizational level maintenance activities. The absence of an intermediate level maintenance repair and manufacturing capability for aircraft wiring and cable assemblies contributed significantly to unacceptable Non Mission Capable and Partial Mission Capable rates.

G. DESCRIPTION OF NEW DEVELOPMENT

1. Functional Description

a. Group 0. The A/U24T-1 (V) WTS performs continuity and insulation testing, and aids in manufacture of wire harness assemblies. The WTS is portable, computer-controlled, and consists of two major components, the Test Control Unit (TCU) TTU-543/U24T-1 (V), and from one to four Switching Units (SU) SWU-79U24T-1 (V). The WTS interfaces with the Unit Under Test (UUT) through adapters and buffer cables to perform test and diagnostic routines. Utilizing one SU, the test set provides 500 test points on the UUT. Utilizing four SUs, the test set provides 2,000 test points to measure continuity, resistance, and insulation breakdown between two UUT test points. The Wiring Systems Repair Tool Set contains common tools, special tools, and accessories used for wiring harness repair or manufacture.

b. Group I

- (1) **Pneumatic Wire Stripper.** The Pneumatic Wire Stripper is a handheld device that uses compressed air to strip the insulation from the wire.
- (2) Pneumatic Wire Crimper (Type I). The Pneumatic Wire Crimper (Type I) is a hand-held device that uses compressed air to crimp contacts to small gauge wires.
- (3) **Pneumatic Wire Crimper** (**Type II**). The Pneumatic Wire Crimper (Type II) is a hand-held device that uses compressed air to crimp contacts to large gauge wires.
- (4) Labeling Machine. The Labeling Machine is a device capable of printing a variety of labels used to mark cables, wires, terminal blocks, and other electronic components.
- (5) Instant Connector Kit. The Instant Connector Kit is a kit used to fabricate connectors from polyethylene. This kit eliminates the procurement lead-time of connectors when a technician has an immediate need to manufacture an adapter cable for the WTS.
- **(6) Encyclopedia of Connectors.** The Encyclopedia of Connectors is a six volume set of books containing detailed connector configuration, ordering information, lists of manufacturers, commercial and military part numbers, contacts, tools, drawings, dimensional data, and military specifications related to plating, testing, and wire.

c. Group II

(1) **Braiding Machine.** The Braiding Machine is an electro-mechanical device that braids cable assemblies with an external metal or cloth material to provide Electro-Magnetic Interference (EMI) shielding, additional chafe protection, and durability.

(2) Wire Processor. The Wire Processor is used for measuring, trimming, stripping, and preparing electrical wire for assembly into aircraft wiring harness assemblies.

2. Physical Description. CHROME Group 0 through Group II equipment is assigned to Work Center 69C. The physical description of each unit is as follows:

EQUIPMENT	L x W x H (INCHES)	WEIGHT (POUNDS)
GROUP 0:		
WTS A/U24T-1(V) TCU, TTU-543/U24T-1(V)	18 x 20 x 11	50
SU, SWU-79/U24T-1(V)	21x 19 x 12	47
Basic, A/E32M-38 Wiring System Repair Tool Set	33 x 46 x 60	204
Shore Supplemental A/E32M-38 Wiring System Repair Tool Set	33 x 46 x 60	204
Marine Corps, A/E32M-38 Wiring System Repair Tool Set	33 x 46 x 60	204
GROUP I:		
Pneumatic Wire Stripper	7 x 2 x 3	2
Pneumatic Wire Crimper (Type I)	8 x 2 x 2	3
Pneumatic Wire Crimper (Type II)	10 x 3 x 3	5
Labeling Machine	18 x 8 x 5	7
Instant Connector Kit	14 x 10 x 4	10
Portable Air Compressor	36 x 18 x 30	150
GROUP II:		
Wire Braiding Machine	40 x 40 x 72	700
Wire Processor	17 x 15 x 12	70

- 3. New Development Introduction. NA
- 4. Significant Interfaces. NA
- 5. New Features, Configurations, or Material. NA

H. CONCEPTS

- 1. Operational Concept. CHROME equipment is designed to be operated by qualified intermediate level maintenance personnel through use of the WTS, General Purpose Test Equipment (GPTE), and Common Support Equipment (CSE). Navy Aviation Electrician's Mates (AE) and Aviation Electronics Technicians (AT), and Marine Corps personnel with MOS 6423 will test wiring assemblies for pin-to-pin continuity, insulation breakdown, and overall wiring system performance. After fault isolation, the local Intermediate Maintenance Activity (IMA) will repair the wiring harness assemblies and return them to a Ready For Issue (RFI) status. If repair of an assembly using common and special tools and equipment. Special tool kits and equipment are identified in Part IV.A.2. of this NTSP.
- 2. Maintenance Concept. General direction and guidance regarding the maintenance concept for the CHROME Program is provided by the Naval Aviation Maintenance Program (NAMP), OPNAVINST 4790.2G. The NAMP prescribes the concept of three levels of maintenance: organizational, intermediate, and depot. Maintenance level assignment is determined by which level has the resources to effectively and economically accomplish the maintenance action, and organizational structure for collection of data to manage the NAMP.
 - a. Organizational. NA
 - **b.** Intermediate

(1) Preventive Maintenance

(a) **Group 0.** There are no special preventive maintenance tasks required for the WTS or Wiring Systems Repair Tool Sets, therefore, a Maintenance Requirement Card deck was not developed.

(b) Group I. Preventive maintenance is conducted during the preoperational inspection and per commercially provided operational instructions.

(c) **Group II.** Procedures encompassing all types of Wire Braiders and Wire Processors include:

- Daily Inspection (Wire Braider and Wire Processor)
- Track Surface Lubrication (Wire Braider)
- Track Surface Cleaning (Wire Braider)
- Feed Wheel and Wire Cutting-Splicing Blade Inspection (Wire Processor)

(2) Corrective Maintenance

(a) **Group 0.** Corrective maintenance includes removal and replacement of defective sub-assemblies detected during automated WTS self-test operation.

After performing corrective maintenance, operators can run a self-test to verify the integrity of the WTS.

(b) Group I. There is no formal corrective maintenance for these items. The equipment is consumable and should be repaired or replaced by the IMAs, per the NAMP.

(c) **Group II.** Per SM&R codes, intermediate level maintenance personnel will perform repairs of the end item and sub-assemblies, as required. Corrective maintenance will consist of the following:

- Fault Locating
- Removal and Replacement of Faulty Sub-Assemblies
- c. Depot. NA
- **d. Interim Maintenance.** Technical assistance is provided by Naval Air Technical Data and Engineering Service Command (NATEC) representatives and project engineers at NAWCADLKE. The Navy Support Dates (NSDs) for CHROME equipment are as follows:

Group 0	September 1, 1998
Group I	September 30, 1997
Group II	March 1, 2004

e. Life Cycle Maintenance Plan. NA

3. Manning Concept. All USMC MOS 6423 personnel receive CHROME training via USMC Miniature Electronics/Instrument/Cable Repair Intermediate Maintenance Track M-102-6423.

Navy AE and AT personnel *may* receive CHROME training on an as required basis via Aircraft Electrical Interface Devices Intermediate Maintenance course C-602-3023. Traditionally Navy AE and AT NEC 9526 and 9527 personnel are assigned to Work Center 69C and are responsible for cable repair. There is no NEC awarded for the satisfactory completion of Aircraft Electrical Interface Devices Intermediate Maintenance course C-602-3023. Prerequisites for this course are limited only to the AE (A1) or AT (A1) graduate. Navy AE and AT personnel assigned to shore based AIMD Work Centers 69C may attended this course at the discretion of their parent command. Navy manpower requirements for CHROME cannot be determined by NEC or billets authorized per command, but rather by the specific needs of the command at which AE and AT Work Center 69C personnel are assigned. Navy manpower requirements are not included in this document.

4. Training Concept. Follow-on training for CHROME is provided by Maintenance Training Unit (MTU) 1037, Naval Air Maintenance Training Unit (NAMTRAU) Jacksonville, Florida, and MTU 1067, NAMTRAU North Island, California.

Selected Reserve personnel may earn intermediate level maintenance qualifications by attending formal training at NAMTRAUs providing quotas, funding, for students are available to attend the training. Specific guidelines are contained in NAVPERS 18068F Volume II, Chapter IV, Navy Enlisted Classifications.

The established training concept for most aviation maintenance training divides "A" School courses into two or more segments called *Core* and *Strand*. Many organizational level "C" School courses are also divided into separate *Initial* and *Career* training courses. "A" School *Core* courses include general knowledge and skills training for the particular rating, while "A" School *Strand* courses focus on the more specialized training requirements for that rating and a specific aircraft or equipment, based on the student's fleet activity destination. *Strand* training immediately follows *Core* training and is part of the "A" School. Upon completion of *Core* and *Strand* "A" Schools, graduates going to organizational level activities attend the appropriate *Initial* "C" School for additional specific training. *Initial* "C" School training is intended for students in paygrades E-4 and below. *Career* "C" School training is provided to organizational level personnel, E-5 and above, to enhance skills and knowledge within their field. "A" School graduates going to intermediate level activities attend the appropriate intermediate level "C" School. Intermediate level "C" Schools are not separated into *Initial* and *Career* courses.

a. Initial Training. Dual and Associates developed the Aircraft Electrical Interface Devices Intermediate Level Maintenance course and provided one session of initial training at MTU 1003 NAMTRAU Oceana, Virginia, during March and April 1989. Two sessions of Group II initial training are planned in January 2002. When information on the location and length of the two initial training sessions for Group II becomes available it will be included in updates to this NTSP.

Title	Aircraft Electrical Interface Devices Intermediate Level Maintenance Initial Training
Description	This course provided MTU instructors and cadre maintenance personnel with the knowledge and skills necessary to teach intermediate level cable harness and wiring repair and manufacturing.
Location	MTU 1003 NAMTRAU Oceana
Length	12 days
RFT date	Completed

b. Follow-on Training. All CHROME equipment has been included in the October 1998 revision of the AEID course. Group I equipment includes common tools and does

not require in-depth technical training. Therefore, it does not significantly impact the follow-on course. Group 0 and II equipment requires in-depth technical training to enhance skills and techniques required to braid and manufacture cable harnesses, and repair wire braiding and wire processing machinery.

Title	Aircraft Electrical Interface Devices Intermediate Level Maintenance
CIN	C-602-3023 (Part of track M-102-6423, USMC only)
Model Manager	MTU 1037 NAMTRAU Jacksonville
Description This course provides ATs and AEs with sufficient so knowledge of aircraft electrical interface devices to perform repair and remanufacture of aircraft cables wiring assemblies in an IMA working environment close supervision.	
Locations	MTU 1037, NAMTRAU Jacksonville MTU 1067, NAMTRAU North Island
Length	19 days
RFT date	Currently available
Skill identifier	NEC is NA; MOS 6423
TTE/TD	TD is NA; refer to element IV.A.1 for TTE.
Prerequisites	AE: C-602-3039, Aviation Electrician's Mate O Level Strand Class A1 AT: C-100-2017, Avionics Technician I Level Class

c. Student Profiles

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS	
AE	C-100-2020, Avionics Common Core Class A1 C-602-2039, Aviation Electrician's Mate O Level Strand Class A1	
AT	C-100-2020, Avionics Common Core Class A1 C-100-2017, Avionics Technician I Level Class A1	
MOS 6423	C-100-2020, Avionics Common Core Class A1 C-602-2039, Aviation Electrician's Mate O Level Strand Class A1	

d. Training Pipelines. As a result of the Work Center 640, 650, and 690 Maintenance Training Requirements Review (MTRR) held at Naval Air Station (NAS) Norfolk, 16-20 June 1997, Chief of Naval Operations (CNO) (N889) authorized the Marine Corps to reestablish the training pipeline for M-102-6423. The following is a list of courses within this reestablished pipeline:

MOS 6423, AVIATION ELECTRONIC MICRO-MINIATURE/INSTRUMENT AND CABLE REPAIR			
CIN	CIN TITLE LENGTH		
A-100-0072	Miniature Electronics Repair	26 days	
C-602-3023	Aircraft Electrical Interface Devices Intermediate Level Maintenance	19 days	
C-602-3019	Sealed Instrument Repair	54 days	

I. ONBOARD (IN-SERVICE) TRAINING

1. Proficiency or Other Training Organic to the New Development

a. Aviation Maintenance Training Continuum System. AMTCS will provide career path training to the Sailor or Marine from their initial service entry to the end of their military career. AMTCS is planned to be an integrated system that will satisfy the training/administrative requirements of both the individual and the organization; the benefits will be manifested in the increased effectiveness of the technicians and the increased efficiencies of the management of the training business process. By capitalizing on technological advances and integrating systems and processes where appropriate, the right amount of training can be provided at the right time, thus meeting the CNO's mandated "just-in-time" training approach.

Technology investments enabled the development of several state-of-the-art training and administrative tools: Computer-Based Training (CBT) for the technicians in the Fleet in the form of Interactive Courseware (ICW) with Computer Managed Instruction (CMI) and Computer Aided Instruction (CAI) for the schoolhouse.

Included in the AMTCS development effort is the Aviation Maintenance Training Continuum System - Software Module (ASM) which provides testing {Test and Evaluation (TEV)}, recording {Electronic Training Jacket (ETJ)}, and a Feedback system. The core functionality of these AMTCS tools are based and designed around actual maintenance related tasks the technicians perform, and the tasks are stored and maintained in a Master Task List (MTL) data bank. These tools are procured and fielded with appropriate COTS hardware and software i.e. Fleet Training Devices (FTD) - Laptops, Personal Computers (PC0; Electronic Class Rooms (ECR); Learning Resource Centers (LRC) and operating software, network software and hardware.

Upon receipt of direction from OPNAV (N889H), AMTCS is to be implemented and the new tools integrated into the daily training environment of all participating aviation activities and

supporting elements. AMTCS will serve as the standard training system for aviation maintenance training within the Navy and Marine Corps, and is planned to supersede the existing Maintenance Training Improvement Program (MTIP) and Maintenance Training Management and Evaluation Program (MATMEP) programs.

2. Personnel Qualification Standards. NA

3. Other Onboard or In-Service Training Packages. Marine Corps onboard training is based on the current series of MCO P4790.12, Individual Training Standards System and MATMEP. This program is designed to meet Marine Corps, as well as Navy OPNAVINST 4790.2 series, maintenance training requirements. It is a performance-based, standardized, level-progressive, documentable, training management and evaluation program. It identifies and prioritizes task inventories by MOS through a front-end analysis process that identifies task, skill, and knowledge requirements of each MOS. MATMEP is planned to be replaced by AMTCS.

J. LOGISTICS SUPPORT

1. Manufacturer and Contract Numbers. The following is a list of CHROME equipment, manufacturers, and contract numbers:

CONTRACT NUMBER	MANUFACTURER	ADDRESS
GROUP 0:		
N00163-93-C-0100 WTS AU24T-1(V)	CSTS Inc.	1719 Elsbrook Lane Anaheim, CA
N00163-92-C-0185 - Wiring System Repair Tool Set	Daniels Manufacturing Corporation	526 Thorpe Road Orlando, FL 32801
GROUP I:		
N68335-97-M-3647 - Pneumatic Crimp Tool (Small Wire)	Daniels Manufacturing Corporation	6400 Shafer Court Suite 350 Rosemont, IL 60018
N68335-97-M-3647 - Pneumatic Crimp Tool (Large Wire)	Daniels Manufacturing Corporation	6400 Shafer Court Suite 350 Rosemont, IL 60018
N68335-97-M-3653 - Labeling System Kit	R.S. Hughes Company	4643 South 32nd Street Phoenix, AZ 85040

CONTRACT NUMBER	MANUFACTURER	ADDRESS
N68335-97-M-3650 - Pneumatic Wire Stripper	R.S. Hughes Company	4643 South 32nd Street Phoenix, AZ 85040
N68335-97-M-3579 - Instant Connector Repair Kit	Wiring Analyzers, Inc.	P.O. Box 1416 Edmonds, WA 98020
N68335-97-M-3652 - Encyclopedia of Connectors	Edwards Publishing Company, Inc.	14129 Chadron Avenue P.O. Box 1668 Hawthorne, CA 90251

Note: Group II contract award is anticipated for January 2001.

- **2. Program Documentation.** A Users Logistics Support Summary (ULSS) for the Group 0 WTS was developed by Naval Air Warfare Center (NAWC) Indianapolis, and approved 20 February 1996 by Program Manager, Air (PMA) 260. A ULSS and an Acquisition Logistics Support Plan (ALSP) for Group I was developed and approved by NAWCADLKE, 19 May 1994 and 11 March 1997, respectively. There is an ALSP developed for Group II, but it is on hold due to date slippage.
- **3. Technical Data Plan.** An advanced technical manual was developed for the Group 0 WTS and was delivered with equipment. Due to the simplicity of Group I equipment, formal Naval Air Systems Command technical manual numbers will not be assigned to any Group I equipment, and a Technical Manual Contract Requirement is not required. Manufacturers provided a user's guide with each piece of equipment delivered. The Contractor will provide off-the-shelf commercial manuals for Group II equipment.
- **4. Test Sets, Tools, and Test Equipment.** Special tools and test equipment requirements have been determined by NAWCADLKE. Test sets, tools, and test equipment for the intermediate level course are identified in element IV.A.1. of this NTSP.

5. Repair Parts

- **a. Group 0.** The Naval Aviation Inventory Control Point (NAVICP) Mechanicsburg, Pennsylvania, will serve as the Program Support Inventory Control Point (PSICP) and provide complete post-Material Support Date (MSD) supply support for the WTS. MSD was achieved in September 1997.
- **b. Group I.** The Group I CHROME equipment is consumable; therefore, there will be minimal supply support required. These consumables are identified in the ULSS. Detailed supplier information is provided to allow the user to order through open purchase. Provisioning was not required. MSD and Initial Operating Capability (IOC) were both achieved in July 1997.

c. Group II. NAVICP will serve as the PSICP. Spare parts will be provided based on the most practical level of repair. This level will be determined by NAWCADLKE. Full provisioning will be determined by the NAVICP based on documentation provided by NAWCADLKE. MSD is scheduled for March 2003

6. Human Systems Integration. NA

K. SCHEDULES

1. Installation and Delivery Schedules. The delivery schedule for CHROME Group 0, I, and II Equipment is as follows:

ACTIVITY	GROUP 0	GROUP I	GROUP II
AIMD Atsugi	3/95	***	TBD
AIMD Barbers Point	3/95		
AIMD Brunswick	12/94		
AIMD China Lake	3/95	9/97	
AIMD Corpus Christi	3/95	9/97	
AIMD Diego Garcia	3/95		
AIMD Fallon	3/95		
AIMD Jacksonville	12/94	9/97	TBD
AIMD Keflavik	1/95		
AIMD Lemoore	3/95	***	
AIMD Mayport	1/95		
AIMD Misawa	3/95		
AIMD Norfolk	12/94	9/97	
AIMD North Island	3/95	9/97	TBD
AIMD Oceana	10/94	9/97	TBD
AIMD Rota	12/94		
AIMD Sigonella	12/94	9/97	TBD
AIMD Whidbey Island	3/95	9/97	TBD
CV 62 USS Independence	3/95	9/97	
CV 63 USS Kitty Hawk	3/95	9/97	

ACTIVITY	GROUP 0	GROUP I	GROUP II
CV 64 USS Constellation	3/95	9/97	
CV 67 USS John F. Kennedy	1/95	9/97	
CVN 65 USS Enterprise	12/94	9/97	
CVN 68 USS Nimitz	3/95	9/97	
CVN 69 USS Dwight D. Eisenhower	10/94		
CVN 70 USS Carl Vinson	3/95	9/97	
CVN 71 USS Theodore Roosevelt	10/94	9/97	
CVN 72 USS Abraham Lincoln	3/95	9/97	
CVN 73 USS George Washington	12/94	9/97	
RAIMD Atlanta	10/94	9/97	TBD
RAIMD Fort Worth	10/94	9/97	
RAIMD New Orleans	10/94		
RAIMD Willow Grove	12/94	9/97	
NAWCAD Patuxent River	12/94	9/97	TBD
NAWCAD Lakehurst	10/94	9/97	TBD
MTU 1067 North Island	10/94	9/97	TBD
MTU 1037 Jacksonville	10/94	9/97	TBD
MALS-11 Miramar	3/95	9/97	TBD
MALS-12 Iwakuni	3/95	9/97	TBD
MALS-13 Yuma	3/95	9/97	TBD
MALS-14 Cherry Point	12/94	9/97	TBD
MALS-16 Miramar	3/95	9/97	TBD
MALS-26 New River	12/94	9/97	TBD
MALS-29 New River	12/94	9/97	TBD
MALS-31 Beaufort	12/94	9/97	TBD
MALS-36 Futenma	3/95	9/97	TBD
MALS-39 Camp Pendleton	3/95	9/97	TBD
MALS-41 Dallas	12/94	***	TBD

ACTIVITY	GROUP 0	GROUP I	GROUP II
MALS-49 Stewart	10/94		
MALS-42 Atlanta	12/94	***	TBD
NAWCAD China Lake		9/97	
CNATRA Corpus Christi	3/95	9/97	
AIMD Pensacola	***	9/97	TBD

*** Indicates activities that did not initially receive CHROME Groups 0 and I equipment and will require them for full capability. During the FY99 APN-7 conference Aircraft Controlling Custodian (ACC) and Type Commanders (TYCOMs) approved the acquisition of additional Group 0 and I equipment for those activities receiving CHROME Group II equipment. Empty fields in the table indicate no plans for the activities to receive that category equipment. The APN-7 conference also changed the CHROME program to ashore units only; however, at ACC/TYCOM discretion, CHROME equipment may remain onboard those sea activities already in receipt. Any changes to the above schedule will be included in future updates to this NTSP.

- **2. Ready For Operational Use Schedule.** All CHROME Program equipment items are Ready for Operational Use upon receipt.
- **3.** Time Required to Install at Operational Sites. None of the CHROME Program equipment items require special or non-standard installation for Navy Aircraft Intermediate Maintenance Departments (AIMDs), however Marine mobile facilities configuration ST01 is being reconfigured as WR01 to accommodate CHROME equipment at Marine Corps IMAs. Upgraded facilities will be available to meet the developed delivery schedule.
 - 4. Foreign Military Sales and Other Source Delivery Schedule. NA
 - 5. Training Device and Technical Training Equipment Delivery Schedule. NA

L. GOVERNMENT FURNISHED EQUIPMENT AND CONTRACTOR FURNISHED EQUIPMENT TRAINING REQUIREMENTS. NA

M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
ULSS Cable Harness Repair or Manufacturing Equivalent Equipment Group I	NAWCADLKE U76097-004	NAWCADLKE	Approved May 94
ULSS A/U24T-1(V) Wire Test Set	NA	PMA260	Approved Feb 96
ALSP Cable Harness Repair or Manufacturing Equivalent Equipment Group I	176097-004	NAWCADLKE	Approved Mar 97
ALSP Cable Harness Repair or Manufacturing Equivalent Equipment Group II	76097009	PMA260	Approved Sep 97

PART II - BILLET AND PERSONNEL REQUIREMENTS

The following elements are not affected by the CHROME Program and, therefore, are not included in Part II of this NTSP:

II.A. Billet Requirements

II.A.2.b. Billets to be Deleted in Operational and Fleet Support Activities

Note: All USMC MOS 6423 personnel receive CHROME training via USMC Miniature Electronics/Instrument/Cable Repair Intermediate Maintenance Track M-102-6423. Navy AE and AT personnel may receive CHROME training on an as required basis via Aircraft Electrical Interface Devices Intermediate Maintenance course C-602-3023. Traditionally Navy AE and AT NEC 9526 and 9527 personnel are assigned to Work Center 69C and are responsible for cable repair. There is no NEC awarded for the satisfactory completion of Aircraft Electrical Interface Devices Intermediate Maintenance course C-602-3023. Prerequisites for this course are limited only to the AE (A1) or AT (A1) graduate. Navy AE and AT personnel assigned to shore based AIMD Work Centers 69C may attended this course at the discretion of their parent command. Navy manpower requirements for CHROME cannot be determined by NEC or billets authorized per command, but rather by the specific needs of the command at which AE and AT Work Center 69C personnel are assigned. Navy manpower requirements are not included in this document.

PART II - BILLET AND PERSONNEL REQUIREMENTS

II.A. BILLET REQUIREMENTS

VAQ-129, NAS Whidbey Island

II.A.1.a. OPERATIONAL AND FLEET SUPPORT ACTIVITY ACTIVATION SCHEDULE

II.A.1.a. OPERATIONAL AND FLEET SUPPORT ACTIVITY ACTIVATION SCHEDULE

DATE: **SOURCE**: Extract from Table of Manpower Requirements, TFS, MCCDC 2/1/00 **ACTIVITY, UIC PFYs** CFY01 FY02 FY03 FY04 FY05 VMA-211, MCAS Yuma VMA-214, MCAS Yuma VMA-311, MCAS Yuma VMA-513, MCAS Yuma VMFA(AW)-121, MCAS Miramar VMFA(AW)-225, MCAS Miramar VMFA(AW)-242, MCAS Miramar VMFA-314, MCAS Miramar VMFA-323, MCAS Miramar VMFAT-101, MCAS Miramar VMM-161, MCAS Miramar VMM-163, MCAS Miramar VMU-1, MCB 29 Palms TOTAL: FLEET SUPPORT ACTIVITIES - USMC MAL-42 (RW), Marietta MALS-14, MCAS Cherry Point MALS-26, MCAS New River MALS-29, MCAS New River MALS-31, MCAS Beaufort MALS-49 (RW), Fort Stewart Site Support, NAS Norfolk Structure Savings from VMMT-204 MALS-11, MCAS Miramar MALS-12, MCAS Iwakuni MALS-13, MCAS Yuma MALS-16, MCAS Miramar MALS-36, MCAS Futenma MALS-39, Camp Pendleton MALS-41, Fort Worth TOTAL:

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILL OFF	ETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
OPERATIONAL ACTIVITIES - USMC					
HMM-162, MCAS New River, 09167 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
HMM-261, MCAS New River, 09167 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
HMM-263, MCAS New River, 09167 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
HMM-264, MCAS New River, 09167 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
HMM-266, MCAS New River, 09167 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
HMM-365, MCAS New River, 09167 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
HMT-302, MCAS New River, 09132 USMC	0	1	CPL	6423	
ACTIVITY TOTAL:	0	1			
HMX-1, MCAS Quantico, 48099 USMC	0	2	LCPL	6423	
ACTIVITY TOTAL:	0	2			
VMA-223, MCAS Cherry Point, 57080 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLE [®] OFF	TS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
VMA-231, MCAS Cherry Point, 57080					
USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMA-542, MCAS Cherry Point, 57080 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMAQ-1, MCAS Cherry Point, 57080 USMC	0 0	1 1	CPL LCPL	6423 6423	
ACTIVITY TOTAL:	0	2			
VMAQ-2, MCAS Cherry Point, 57080 USMC	0 0	1 1	CPL LCPL	6423 6423	
ACTIVITY TOTAL:	0	2			
VMAQ-3, MCAS Cherry Point, 57080 USMC	0 0	1	CPL LCPL	6423 6423	
ACTIVITY TOTAL:	0	2			
VMAQ-4, MCAS Cherry Point, 57080 USMC	0 0	1 1	CPL LCPL	6423 6423	
ACTIVITY TOTAL:	0	2			
VMAT-203, MCAS Cherry Point, 57080 USMC	0 0	1 2	CPL LCPL	6423 6423	
ACTIVITY TOTAL:	0	3			
VMFA(AW)-224, MCAS Beaufort, 09131 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILL OFF	ETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
VMFA(AW)-332, MCAS Beaufort, 09131 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMFA(AW)-533, MCAS Beaufort, 09131 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMFA-251, MCAS Beaufort, 09131 USMC	0	1	CPL	6423	
ACTIVITY TOTAL:	0	1			
VMFA-312, MCAS Beaufort, 09131 USMC	0	1	CPL	6423	
ACTIVITY TOTAL:	0	1			
VMGRT-253, MCAS Cherry Point, 57080 USMC	0	1	CPL	6423	
ACTIVITY TOTAL:	0	1			
VMM-162, MCAS New River, 09167, FY02 Increment USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMM-261, MCAS New River, 09167, FY04 Increment USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMM-264, MCAS New River, 09167, FY01 Increment USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMM-266, MCAS New River, 09167, FY03 Increment USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMMT-204 (FREST MV-22 Phasing), New River, 52833 USMC	0	2 1	CPL LCPL	6423 6423	

ACTIVITY TOTAL: 0 3 II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLE OFF	TS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
VMMT-204 (MV-22 Phasing), MCAS New River, 52 USMC	2833, FY01 Increr 0 0	ment 1 2	CPL LCPL	6423 6423	
ACTIVITY TOTAL:	0	3			
VMU-2, MCAS Cherry Point, 57080 USMC	0	1	CPL	6423	
ACTIVITY TOTAL:	0	1			
HMM(T)-164, Camp Pendleton, 09408 USMC	0 0	1 1	CPL LCPL	6423 6423	
ACTIVITY TOTAL:	0	2			
HMM-161, MCAS Miramar, 46623 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
HMM-163, MCAS Miramar, 46623 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
HMM-165, MCAS Miramar, 46623 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
HMM-166, Camp Pendleton, 31053 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
HMM-262, MCAS Futenma, 57079 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
HMM-265, MCAS Futenma, 57079 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILL OFF	ETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
HMM-268, Camp Pendleton, 31053					
USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
HMM-364, Camp Pendleton, 31053 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
HMT-301, Kaneohe, 31947 USMC	0	1	CPL	6423	
ACTIVITY TOTAL:	0	1			
HMT-303, Camp Pendleton, 55176 USMC	0	3	CPL	6423	
ACTIVITY TOTAL:	0	3			
MALS-46 (FW), MCAS Miramar, 67823 AR	0 0 0	1 3 2	CPL LCPL SGT	6423 6423 6423	
ACTIVITY TOTAL:	0	6			
MALSE, Kaneohe, 31947 USMC	0	2	CPL LCPL	6423 6423	
ACTIVITY TOTAL:	0	5			
VAQ-129, NAS Whidbey Island, 09995 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMA-211, MCAS Yuma, 31055 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMA-214, MCAS Yuma, 31055 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILL OFF	ETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
VMA-311, MCAS Yuma, 31055					
USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMA-513, MCAS Yuma, 31055 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMFA(AW)-121, MCAS Miramar, 46623 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMFA(AW)-225, MCAS Miramar, 46623 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMFA(AW)-242, MCAS Miramar, 46623 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMFA-314, MCAS Miramar, 46623 USMC	0	1	CPL	6423	
ACTIVITY TOTAL:	0	1			
VMFA-323, MCAS Miramar, 46623 USMC	0	1	CPL	6423	
ACTIVITY TOTAL:	0	1			
VMFAT-101, MCAS Miramar, 52817 USMC	0	3	LCPL	6423	
ACTIVITY TOTAL:	0	3			
VMM-161, MCAS Miramar, 46623, FY05 Increment USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILL OFF	ETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
VMM-163, MCAS Miramar, 46623, FY05 Increment USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMM-165, MCAS Miramar, 46623, FY06 Increment USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMM-166, MCAS Miramar, 46623, FY06 Increment USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
VMU-1, MCB 29 Palms, 01480 USMC	0	1	CPL	6423	
ACTIVITY TOTAL:	0	1			
FLEET SUPPORT ACTIVITIES - USMC					
MAL-42 (RW), Marietta, 67245 AR	0 0 0	1 4 1	CPL LCPL SGT	6423 6423 6423	
ACTIVITY TOTAL:	0	6			
MALS-14, MCAS Cherry Point, 57080 USMC	0 0 0	1 3 2	CPL LCPL SGT	6423 6423 6423	
ACTIVITY TOTAL:	0	6			
MALS-26, MCAS New River, 09167 USMC	0 0 0	1 4 1	CPL LCPL SGT	6423 6423 6423	
ACTIVITY TOTAL:	0	6			
MALS-29, MCAS New River, 52841 USMC	0 0 0	1 4 1	CPL LCPL SGT	6423 6423 6423	

ACTIVITY TOTAL: 0 $\,$ 6 II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILL OFF	ETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
MALS-31, MCAS Beaufort, 09131					
USMC	0 0 0	1 3 2	CPL LCPL SGT	6423 6423 6423	
ACTIVITY TOTAL:	0	6			
MALS-49 (RW), Fort Stewart, 67855 USMC	0	1 1	LCPL SGT	6423 6423	
AR	0 0	1 3	CPL LCPL	6423 6423	
ACTIVITY TOTAL:	0	6			
Site Support, NAS Norfolk, 00188 USMC	0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
Structure Savings from VMMT-204, 52833, FY01 Increme	nt 0	1	LCPL	6423	
ACTIVITY TOTAL:	0	1			
MALS-11, MCAS Miramar, 46623 USMC	0 0 0	1 3 2	CPL LCPL SGT	6423 6423 6423	
ACTIVITY TOTAL:	0	6			
MALS-12, MCAS Iwakuni, 41975 USMC	0 0 0	1 3 2	CPL LCPL SGT	6423 6423 6423	
ACTIVITY TOTAL:	0	6			
MALS-13, MCAS Yuma, 31055 USMC	0 0 0	1 3 2	CPL LCPL SGT	6423 6423 6423	
ACTIVITY TOTAL:	0	6			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILL OFF	ETS ENL	DESIG/ Rating	PNEC/ PMOS	SNEC/ SMOS
MALS-16, MCAS Miramar, 46623 USMC	0 0 0	1 4 1	CPL LCPL SGT	6423 6423 6423	
ACTIVITY TOTAL:	0	6			
MALS-36, MCAS Futenma, 57079 USMC	0 0 0	1 4 1	CPL LCPL SGT	6423 6423 6423	
ACTIVITY TOTAL:	0	6			
MALS-39, Camp Pendleton, 31053 USMC	0 0 0	1 4 1	CPL LCPL SGT	6423 6423 6423	
ACTIVITY TOTAL:	0	6			
MALS-41, Fort Worth, 67837 USMC	0	2	SGT	6423	
AR	0 0	1 3	CPL LCPL	6423 6423	
ACTIVITY TOTAL:	0	6			

II.A.1.c. TOTAL BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs OFF ENL	CFY01 OFF ENL	FY02 OFF ENL	FY03 OFF ENL	FY04 OFF ENL	FY05 OFF ENL
USMC OPEI CPL LCPL	RATIONAL ACTIV 6423 6423	/ITIES - USMC 22 44	1 3	0 1	0 1	0 1	0 2
USMC OPEI CPL LCPL SGT	RATIONAL ACTIV 6423 6423 6423	/ITIES - AR 0 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
USMC FLEE CPL LCPL SGT	ET SUPPORT AC 6423 6423 6423	TIVITIES - USM 10 37 18	C 0 1 0	0 0 0	0 0 0	0 0 0	0 0 0
USMC FLEE CPL LCPL SGT	ET SUPPORT AC 6423 6423 6423	TIVITIES - AR 3 10 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
SUMMARY TOTALS:							
USMC OPERATIONAL ACTIVITIES - USMC 66			4	1	1	1	2
USMC OPEI	RATIONAL ACTI\	/ITIES - AR 0	0	0	0	0	0
USMC FLEET SUPPORT ACTIVITIES - US 65		TIVITIES - USM 65	C 1	0	0	0	0
USMC FLEE	ET SUPPORT AC	TIVITIES - AR 14	0	0	0	0	0
GRAND TOTALS:							
USMC - US	SMC	131	5	1	1	1	2
USMC - AF	2	14	0	0	0	0	0

II.A.2.a. OPERATIONAL AND FLEET SUPPORT ACTIVITY DEACTIVATION SCHEDULE

SOURCE: Extract from Table of Manpower Requirements, TFS, MCCDC								
ACTIVITY, UIC		PFYs	CFY01	FY02	FY03	FY04	FY05	
OPERATIONAL ACTIVITIES - USMC								
HMM-162, MCAS New River	09167	0	0	1	0	0	0	
HMM-261, MCAS New River	09167	0	0	0	1	0	0	
HMM-264, MCAS New River	09167	0	1	0	0	0	0	
HMM-266, MCAS New River	09167	0	0	0	0	1	0	
VMFA-251, MCAS Beaufort	09131	0	0	0	0	1	0	
VMFA-312, MCAS Beaufort	09131	0	0	0	0	1	0	
VMMT-204 (FREST MV-22 Phasing)	52833	0	1	0	0	0	0	
HMM-161, MCAS Miramar	46623	0	0	0	0	0	1	
HMM-163, MCAS Miramar	46623	0	0	0	0	0	1	
HMT-301, Kaneohe	31947	0	0	0	0	1	0	
MALS-46 (FW), MCAS Miramar	67823	1	0	0	0	0	0	
VMFA-314, MCAS Miramar	46623	0	0	0	0	1	0	
VMFA-323, MCAS Miramar	46623	0	0	0	0	1	0	
TOTAL:		1	2	1	1	6	2	

II.A.2.c. TOTAL BILLETS TO BE DELETED IN OPERATIONAL AND FLEET SUPPORT ACTIVITIES

DESIG/	PNEC/SNEC	PFYs	CFY01	FY02	FY03	FY04	FY05
RATING	PMOS/SMOS	OFF ENL	OFF ENL	OFF ENL	OFF ENL	OFF ENL	OFF ENL
USMC OPE CPL LCPL	RATIONAL ACTIV 6423 6423	VITIES - USMC 7 7	-2 -2	0 -1	0 -1	-5 -1	0 -2
SUMMARY	TOTALS:						
USMC OPE	RATIONAL ACTIV	VITIES - USMC 14	-4	-1	-1	-6	-2
GRAND TO	TALS:						
USMC - US	SMC	14	-4	-1	-1	-6	-2

II.A.3. TRAINING ACTIVITIES INSTRUCTOR AND SUPPORT BILLET REQUIREMENTS

DESIG RATING		PFYs F EN		CFY01 FF EN	L O	FY02 FF EN	NL C	FY03 FF EI	NL	FY04 OFF E	NL	FY OFF	
TRAINING A	CTIVITY, LOCATION	I, UIC:	Advanc	ed Elect	rical Sys	stems,	San Dieg	o, CA,	UIC is N	Not Appli	cable		
INSTRUCTO	R BILLETS												
USMC SGT	6423	0	0	0	0	0	1	0	1	0	1	0	1
TOTAL:		0	0	0	0	0	1	0	1	0	1	0	1
TRAINING A	CTIVITY, LOCATION	I, UIC:	Fleet Tr	aining C	Center, 1	Norfolk,	VA, 001	2A					
INSTRUCTO	R BILLETS												
USMC SGT	6423	0	0	0	0	0	1	0	1	0	1	0	1
TOTAL:		0	0	0	0	0	1	0	1	0	1	0	1
	CTIVITY, LOCATION	I, UIC:	MATSG	i, Pensa	acola, Fl	_, 6741	2						
INSTRUCTO	K BILLE 12												
USMC SGT	6423	0	2	0	2	0	0	0	0	0	0	0	0
TOTAL:		0	2	0	2	0	0	0	0	0	0	0	0
TRAINING A	CTIVITY, LOCATION	I, UIC:	NAMTR	AU 301	0, NAS	Oceana	a, VA, 66	045					
INSTRUCTO	R BILLETS												
USMC SGT	6423	0	1	0	1	0	1	0	1	0	1	0	1
TOTAL:		0	1	0	1	0	1	0	1	0	1	0	1

II.A.4. CHARGEABLE STUDENT BILLET REQUIREMENTS

ACTIVITY,	USN/	PF	/s	CF	Y01	FY	02	FY	03	FY	04	FY	05
LOCATION, UIC	USMC	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
MTU 1037 NAMTI	RAU, NAS Jac	ksonville	e, 66051										
	USMC		1.0		1.1		1.0		1.0		1.0		1.0
NATIL 40/7 NIANATI	DALL MAC No.	Ale I e I e e	1 //0/5										
MTU 1067 NAMTI		in Islan			1.0		1 1		1.0		1.0		1.0
	USMC		1.0		1.0		1.1		1.0		1.0		1.0
SUMMARY TOTA	ALS:												
	LICMO		2.0		2.1		2.1		2.0		2.0		2.0
	USMC		2.0		2.1		2.1		2.0		2.0		2.0
GRAND TOTALS	:												
			2.0		2.1		2.1		2.0		2.0		2.0
			2.0		2.1		2.1		2.0		2.0		2.0

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY(+/-	01 CUM	FY(+/-	02 CUM	FY(+/-	O3 CUM	FY! +/-	04 CUM	FY +/-	05 CUM
a. OFFICE	ER - USN			No	ot Applic	able							
b. ENLIST	TED - USN	N		No	ot Applic	able							
c. OFFICE	ER - USM	С		No	ot Applic	able							
d. ENLISTED - USMC													
Operation	al Billets U	JSMC and	AR										
CPL	6423		22	-1	21	0	21	0	21	-5	16	0	16
LCPL	6423		44	1	45	0	45	0	45	0	45	0	45
SGT	6423		0	0	0	0	0	0	0	0	0	0	0
Floot Curv	oort Dillote	LICMC on	A A D										
Fleet Supp CPL	6423	S USIVIC at	13	0	13	0	13	0	13	0	13	0	13
LCPL	6423		47	1	48	0	48	0	48	0	48	0	48
SGT	6423		19	0	19	0	19	0	19	0	19	0	19
301	0423		17	U	17	U	17	O	17	O	17	O	17
Staff Billet	s USMC a	and AR											
SGT	6423		3	0	3	0	3	0	3	0	3	0	3
Chargeabl	le Student	t Billets US	SMC and AR			•	0						•
			2	0	2	0	2	0	2	0	2	0	2
TOTAL U	SMC ENL	ISTED BII	LLETS:										
Operation	al		66	0	66	0	66	0	66	-5	61	0	61
Fleet Supp	oort		79	1	80	0	80	0	80	0	80	0	80
			.,		30	J	00	3	00	J	00	3	00
Staff			3	0	3	0	3	0	3	0	3	0	3
Chargeabl	la Studant	+	2	0	2	0	2	0	2	0	2	0	2
Sharycabi	io otauciii		_	U	_	U	_	U	_	U	۷	U	_

II.B. PERSONNEL REQUIREMENTS

II.B.1. ANNUAL TRAINING INPUT REQUIREMENTS

CIN, COURSE TITLE: C-602-3023, Electrical Interface Devices Intermediate Level Maintenance
COURSE LENGTH: 3.0 Weeks
ATTRITION FACTOR: Navy: 0% USMC: 0% BACKOUT FACTOR: 0.06

TRAINING ACTIVITY S	SOURCE	ACDU/TAR SELRES	CF' OFF	Y01 ENL	F\ OFF	/02 ENL	F' OFF	/03 ENL	FY OFF	04 ENL	FY OFF	05 FNL
MTU 1037 NAI			011	LIVE	011	LIVE	011	LIVE	011	LIVE	011	LIVE
	JSMC	USMC		17		16		16		16		15
		AR		3		3		3		3		3
MTU 1067 NAI	MTRAU, NAS	North Island										
l	JSMC	USMC		18		19		18		18		17
		AR		1		1		1		1		1
		TOTAL:		39		39		38		38		36

PART III - TRAINING REQUIREMENTS

The following elements are not affected by the CHROME Program and, therefore, are not included in Part III of this NTSP:

III.A.1. Initial Training Requirements

III.A.2. Follow-on Training

III.A.2.b. Planned Courses

III.A.2.c. Unique Courses

III.A.3. Existing Training Phased Out

Note: All USMC MOS 6423 personnel receive CHROME training via USMC Miniature Electronics/Instrument/Cable Repair Intermediate Maintenance Track M-102-6423. Navy AE and AT personnel may receive CHROME training on an as required basis via Aircraft Electrical Interface Devices Intermediate Maintenance course C-602-3023. Traditionally Navy AE and AT NEC 9526 and 9527 personnel are assigned to Work Center 69C and are responsible for cable repair. There is no NEC awarded for the satisfactory completion of Aircraft Electrical Interface Devices Intermediate Maintenance course C-602-3023. Prerequisites for this course are limited only to the AE (A1) or AT (A1) graduate. Navy AE and AT personnel assigned to shore based AIMD Work Centers 69C may attended this course at the discretion of their parent command. Navy manpower requirements for CHROME cannot be determined by NEC or billets authorized per command, but rather by the specific needs of the command at which AE and AT Work Center 69C personnel are assigned. Navy manpower requirements are not included in this document.

PART III - TRAINING REQUIREMENTS

III.A. TRAINING COURSE REQUIREMENTS

III.A.2. FOLLOW-ON TRAINING

III.A.2.a. EXISTING COURSES

CIN, COURSE TITLE: C-602-3023 (of track M-102-6423), Aircraft Electrical Interface Devices Intermediate Level

Maintenance

TRAINING ACTIVITY: MTU 1037 NAMTRAU **LOCATION, UIC:** Jacksonville, 66051

SOURCE: USMC STUDENT CATEGORY: USMC - AR

CF'	Y01	F۱	Y02	F'	Y03	F'	Y04	FY	05	
OFF	ENL									
	20		19		19		19		18	ATIR
	20		19		19		19		18	Output
	1.1		1.0		1.0		1.0		1.0	AOB
	1.1		1.0		1.0		1.0		1.0	Chargeable

CIN, COURSE TITLE: C-602-3023 (of track M-102-6423), Aircraft Electrical Interface Devices Intermediate Level

Maintenance

TRAINING ACTIVITY: MTU 1067 NAMTRAU **LOCATION, UIC:** North Island, 66065

SOURCE: USMC **STUDENT CATEGORY**: USMC - AR

CF	Y01	F۱	Y02	F'	Y03	FY(Y04 FY0		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	19		20		19		19		18	ATIR
	19		20		19		19		18	Output
	1.0		1.1		1.0		1.0		1.0	AOB
	1.0		1.1		1.0		1.0		1.0	Chargeable

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

The following elements are not affected by the Cable Harness Repair Or Manufacturing Equivalence (CHROME) Program and, therefore, are not included in part IV of this NTSP:

IV.A. Training Hardware

IV.A.2. Training Devices

IV.B. Courseware Requirements

IV.B.1. Training Services

IV.C. Facility Requirements

- IV.C.1. Facility Requirements Summary (Space/Support) by Activity
- IV.C.2. Facility Requirements Detailed by Activity and Course
- IV.C.3. Facility Project Summary by Program

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

IV.A. TRAINING HARDWARE

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

TRAINING ACTIVITY: MTU 1067 NAMTRAU **LOCATION, UIC:** North Island, 66065

ITEM NUMBER	EQUIPMENT	TYPE OR RANGE OF REPAIR PARTS	QTY REQUIRED	DATE REQUIRED	STATUS
ST 001	Repair Tool Kit		1		Onboard
002	Wire Harness Construction Board		4		Onboard
003	Intermediate Level Master Tool Set		4		Onboard
004	General Purpose Tool Kit		4		Onboard
005	Pneumatic Wire Crimper (Type I)		1		Onboard
006	Pneumatic Wire Crimper (Type II)		1		Onboard
007	Pneumatic Wire Stripper		1		Onboard
800	Labeling Machine		1		Onboard
009	Instant Connector Kit		1		Onboard
GPETE					
001	Digital Multimeter		3		Onboard
SPETE					
001	Wire Marking System		1		Onboard
002	Wire Test Set		2		Onboard
003	Adapter Kits		1		Onboard

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

TRAINING ACTIVITY: MTU 1037 NAMTRAU **LOCATION, UIC:** Jacksonville, 66051

ITEM Number	EQUIPMENT	TYPE OR RANGE OF REPAIR PARTS	QTY REQUIRED	DATE REQUIRED	STATUS
ST					
001	Repair Tool Kit		4		Onboard
002	Wire Harness Construction Board		4		Onboard
003	Intermediate Level Master Tool Set		4		Onboard
004	General Purpose Tool Kit		4		Onboard
005	Pneumatic Wire Crimper (Type I)		1		Onboard
006	Pneumatic Wire Crimper (Type II)		1		Onboard
007	Pneumatic Wire Stripper		1		Onboard
800	Labeling Machine		1		Onboard
009	Instant Connector Kit		1		Onboard
GPETE					
001	Digital Multimeter		3		Onboard
SPETE					
001	Wire Marking System		1		Onboard
002	Wire Test Set		2		Onboard
003	Adapter Kits		1		Onboard

IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

TRAINING ACTIVITY: MTU 1067 NAMTRAU **LOCATION, UIC:** North Island, 66065

CIN, COURSE TITLE: C-602-3023, Aircraft Electrical Interface Devices Intermediate Level Maintenance

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
Student Guides	36		Onboard
Instructor Guides	2		Onboard
Overhead Projector	1		Onboard
Projector Screen	1		Onboard
Video Reproducer	1		Onboard
Color TV Monitor	1		Onboard

TRAINING ACTIVITY: MTU 1037 NAMTRAU **LOCATION, UIC:** Jacksonville, 66051

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
Student Guides	36		Onboard
Instructor Guides	2		Onboard
Overhead Projector	1		Onboard
Projector Screen	1		Onboard
Video Reproducer	1		Onboard
Color TV Monitor	1		Onboard

IV.B.3 TECHNICAL MANUALS

TRAINING ACTIVITY: MTU 1067 NAMTRAU **LOCATION, UIC:** North Island, 66065

TECHNICAL MANUAL TITLE, NUMBER	MEDIUM	QTY REQD	DATE REQD	STATUS
Electrostatic Discharge Control Handbook for Protection of Electrical and Electronic Parts Assemblies, and Equipment (Excluding Electrically Initiated Explosive Devices) DOD-HDBK-263	Hard copy	1		Onboard
Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts Assemblies, and Equipment (Excluding Electrically Initiated Explosive Devices) DOD-STD-1686	Hard copy	2		Onboard
Technical Manual Standard Maintenance Practices, Electronic Assembly Repair NA 01-1A-23	Hard copy	8		Onboard
Installation Practices, Aircraft Electrical and Electronic Wiring NA 01-1A-505 series	Hard copy	8		Onboard
Operation and Maintenance Instruction with IPB (Organizational and Intermediate) Electronic Equipment Maintenance Group 0A8794-USM/NA 17-1-199	Hard copy	8		Onboard
The Encyclopedia of Connectors Edward's Publishing Company 14115 Chadron Avenue, P.O. Box 1668 Hawthorn, CA 90250-1668	Hard copy	6		Onboard

IV.B.3 TECHNICAL MANUALS

TRAINING ACTIVITY: MTU 1037 NAMTRAU **LOCATION, UIC:** Jacksonville, 66051

TECHNICAL MANUAL TITLE, NUMBER	MEDIUM	QTY REQD	DATE REQD	STATUS
Electrostatic Discharge Control Handbook for Protection of Electrical and Electronic Parts Assemblies, and Equipment (Excluding Electrically Initiated Explosive Devices) DOD-HDBK-263	Hard copy	1		Onboard
Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts Assemblies, and Equipment (Excluding Electrically Initiated Explosive Devices) DOD-STD-1686	Hard copy	2		Onboard
Technical Manual Standard Maintenance Practices, Electronic Assembly Repair NA 01-1A-23	Hard copy	8		Onboard
Installation Practices, Aircraft Electrical and Electronic Wiring NA 01-1A-505 series	Hard copy	8		Onboard
Operation and Maintenance Instruction with IPB (Organizational and Intermediate) Electronic Equipment Maintenance Group 0A8794-USM/NA 17-1-199	Hard copy	8		Onboard
The Encyclopedia of Connectors Edward's Publishing Company 14115 Chadron Avenue, P.O. Box 1668 Hawthorn, CA 90250-1668	Hard copy	6		Onboard

PART V - MPT MILESTONES

COG CODE	MPT MILESTONES	DATE	STATUS
DA	Conducted analysis of MPT requirements	Oct 86	Completed
TSA	Conducted Initial Training for CHROME 0 WTS	Oct 95	Completed
DA	Approved ULSS for Group 0 WTS	Feb 96	Completed
DA	Approved ALSP for Group I equipment	Mar 97	Completed
NAWCADLKE	Achieved SED for Group I	Jun 97	Completed
NAWCADLKE	Achieved SED I/II for Group II	Jul 97	Completed
NAVICP	Achieved MSD for CHROME Group I	Jul 97	Completed
NAWCADLKE	Achieved IOC for Group I	Jul 97	Completed
TSA	Developed curricula materials for the revised course C-602-3023A for Group 0 equipment	FY97	Completed
NAVICP	Achieved NSD for Group I	Sep 97	Completed
NAVICP	Achieved MSD for Group 0 WTS	Sep 97	Completed
TSA	Developed curricula materials for the revised course C-602-3023A for Group I and II equipment	FY98	Completed
NAVICP	Achieved NSD for Group 0	Sep 98	Completed
TA	Began Follow-on Training	Oct 98	Completed
TSA	Developed Draft NTSP (Update)	Dec 99	Completed
TSA	Developed Proposed NTSP	May 00	Completed
NAWCADLKE	Award contract for Group II	Jan 01	Pending
NAWCADLKE	Begin Technical Evaluation for Group II	Jul 01	Pending
NAWCADLKE	Achieve SED III for Group II	Sep 01	Pending
TSA	Begin Initial Training for CHROME II	Jan 02	Pending
NAWCADLKE	Establish IOC for Group II	Mar 02	Pending
NAVICP	Achieve MSD for Group II	Mar 03	Pending
NAVICP	Achieve NSD for Group II	Mar 04	Pending

PART VI - DECISION ITEMS/ACTION REQUIRED

DECISION ITEM OR ACTION REQUIRED

COMMAND ACTION

DUE DATE

STATUS

None

PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL		TELEPHONE NUMBERS		
CAPT Owen Fletcher Deputy Head, Plans, Policy, and Fleet Maintenance Support CNO, N881B fletcher.owen@hq.navy.mil	COMM: DSN: FAX:	(703) 604-7747 664-7747 (703) 604-6972		
CAPT Thomas Vandenburg Head, Aviation Technical Training Branch CNO, N889H vandenburg.thomas@hq.navy.mil	COMM: DSN: FAX:	(703) 604-7730 664-7730 (703) 604-6969		
LCDR Mike Belcher NTSP Manager CNO, N889H1 belcher.michael@hq.navy.mil	COMM: DSN: FAX:	` '		
Mr. Robert Zweibel Training Technology Policy CNO, N75K zweilbel.robert@hq.navy.mil	COMM: DSN: FAX:	(703) 614-1344 224-1344 (703) 695-5698		
CDR Kevin Neary Aviation Manpower CNO, N122C1 n122c1@bupers.navy.mil	COMM: DSN: FAX:	(703) 695-3247 225-3247 (703) 614-5308		
LTCOL Angela Clingman USMC Aircraft Maintenance Officer CMC, ASL-33 clingmanab@hqmc.usmc.mil	COMM: DSN: FAX:	(703) 614-1187 224-1187 (703) 679-7343		
ATC Rick Paskoski Assistant Program Manager, Training Systems NAVAIRSYSCOM, PMA205-3E3 paskoskira@navair.navy.mil	COMM: DSN: FAX:	` '		
CDR Robin Mason Aviation NTSP Manager CINCLANTFLT, N-721 masonrf@clf.navy.mil	COMM: DSN: FAX:	(757) 836-0101 836-0101 (757) 836-0141		
Mr. Robert Long Deputy Director for Training CINCPACFLT, N70 u70@cpf.navy.mil	COMM: DSN: FAX:	(808) 471-8513 471-8513 (808) 471-8596		
Mr. Jay Losee Program Manager NAVAIRSYSCOM, PMA260-C12 lossejd@navair.navy.mil	COMM: DSN: FAX:	(301) 757-6874 757-6874 (301) 757-6862		
CAPT Patricia Huiatt Deputy Assistant, Chief of Naval Personnel for Distribution NAVPERSCOM, PERS-4B, p4b@persnet.navy.mil	COMM: DSN: FAX:	(901) 874-3529 882-3529 (901) 874-2606		

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL **TELEPHONE NUMBERS CDR Timothy Ferree COMM**: (901) 874-3690 Branch Head, Aviation Enlisted Assignments DSN: 882-3690 NAVPERSCOM, PERS-404 FAX: (901) 874-2642 p404@persnet.navy.mil **ATC Don Jenkins COMM**: (504) 678-6457 Maintenance Training Coordinator DSN: 678-6457 COMNAVAIRESFOR, N721 FAX: (504) 678-6847 jenkinsd@cnfr.navy.mil MAJ Clint Higginbotham **COMM**: (703) 784-3737 **Training Coordinator** DSN: 278-3707 Marine Aviation Training, C46A3 FAX: (703) 784-3729 higginbothamc@quantico.usmc.mil MAJ Jon Doering **COMM**: (703) 784-6241 Head, ACE Branch, TFS Division DSN: 278-6241 MCCDC, C5325A FAX: (703) 784-6072 doeringjg@mccdc.usmc.mil Mr. Tom Brown **COMM**: (215) 697-6824 WTS Item Manager DSN: 442-6824 FAX: NAVICP, 03324.04 (215) 697-1161 thomas brown@icpphil.navy.mil Mr. Mike Pritchard **COMM**: (215) 697-1395 Group Item Manager DSN: 442-1395 NAVICP, 03323.03 FAX: (215) 697-1161 michael_pritchard@icpphil.navy.mil **CAPT Paul Pratt USMC COMM**: (850) 452-4883 Aviation Technical Training DSN: 922-4883 CNET, ETE-322 FAX: (850) 452-4901 capt_paul_pratt@smtp.cnet.navy.mil Mr. Johnny Jones **COMM**: (732) 323-4205 Assistant Program Manager, Logistics DSN: 624-4205 NAWCADLKE, 3.1.4.4 FAX: (732) 323-4064 jonesjr@navair.navy.mil Mr. Dan Preissman COMM: (732) 323-2844 IPT Leader DSN: 624-2844 NAWCADLKE, 1.1.X.7.2.2 FAX: N/A preissmands@navair.navy.mil Mr. Tom Kowalski **COMM**: (732) 323-4343 Aircraft Wiring System Engineer DSN: 624-4343 NAWCADLKE, 4.8.1.7 FAX: N/A kowalskitp@navair.navy.mil **COMM**: (732) 323-1843 Ms. Aleta Payne Training Manager DSN: 624-1843 NAWCADLKE, 341400B FAX: N/A

payneae@navair.navy.mil

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL

 AVCM Johnnie Bridges
 COMM:
 (850) 452-9708 ext. 244

 Technical Coordinator
 DSN:
 922-9708 ext. 244

 NAMTRAGRU HQ, N2213
 FAX:
 (850) 452-9769

TELEPHONE NUMBERS

avcm-johnnie.k.bridges@smtp.cnet.navy.mil

SSGT Brian Driver COMM: (904) 542-5370
Training Course Model Manager DSN: 942-5370
NAMTRAU 1037 FAX: N/A

nasjaxjarhead@hotmail.com

Mr. Phil SzczyglowskiCOMM:(301) 757-9182Competency ManagerDSN:757-9182NAVAIRSYSCOM, AIR 3.4.1.1FAX:(301) 342-4723szczyglowspr@navair.navy.mil

 Mr. Bob Kresge
 COMM:
 (301) 757-9174

 NTSP Manager
 DSN:
 757-9174

 NAVAIRSYSCOM, AIR 3.4.1.1
 FAX:
 (301) 342-4723

kresgerj@navair.navy.mil

ATCS David Morris

NTSP Coordinator

COMM: (301) 757-9173

DSN: 757-9173

NAVAIRSYSCOM, AIR 3.4.1.1 FAX: (301) 342-4723 morrisdm@navair.navy.mil

 ATC Aubrey Taylor
 COMM:
 (301) 757-9194

 MPT Analyst
 DSN:
 757-9194

 NAVAIRSYSCOM, AIR 3.4.1.1
 FAX:
 (301) 342-4723

tayloral@navair.navy.mil